

1695 CD-Rom

PATENT

ATTORNEY'S DOCKET NO.: NBG-109

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:

Aldo Salimbeni et al.

Serial No.:

10/537,731

Filed: For: June 6, 2005 PROCESS FOR THE PREPARATION OF BICYCLIC

PEPTIDE COMPOUNDS

Examiner:

Not Assigned

Art Unit:

Not Assigned

CERTIFICATE OF MAILING

I hereby certify that the following correspondence is being deposited with the United States Postal service as first class mail in an envelope addressed to the Commissioner for Patents, PO Box 1450, Alexandria, VA 22313—1450 on February 22, 2007.

Mark D. Lorusso

Commissioner for Patents PO BOX 1450 Alexandria, VA 22313-1450

RESPONSE TO STIC BIOTECHNOLOGY SYSTEMS BRANCH RAW SEQUENCE LISTING ERROR REPORT

Sir:

This responds to the Raw Sequence Listing Error Report processed July 3, 2006. On February 21, 2007, applicants' counsel of record spoke with Anne-Marie Corrigan in the STIC Biotechnology Systems Branch with respect to the Raw Sequence Report and was faxed a copy of the report not previously received. Ms. Corrigan explained the substantive errors that could not be identified with the CHECKER software.

Enclosed herewith are two copies of the corrected Sequence Listing in computer readable format. Another copy of the corrected Sequence Listing in paper form is also enclosed. The content of the Sequence Listing information recorded in computer

readable form is identical to the written sequence listing and does not include any new matter. A courtesy copy of the Raw Sequence Listing Error Report is also enclosed to facilitate processing of this response.

Respectfully submitted,

Mark D. Lorusso
Reg. No. 41,955
Lorusso & Associates
3 Pinecrest Terrace
Portsmouth, NH 03801

Tel: (603) 427-0070 Attorneys for Applicants

Docket No.: NBG-109

Date: February 22, 2007



STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: /0/537,73/
Source:
Date Processed by STIC: 7/3/06

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER VERSION 4.4.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS: http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (httm, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
 U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street,
 Alexandria, VA 22314

Revised 01/10/06

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION SERIAL NUMBER: 10/537,731
ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE	
Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.
3Misaligned Amino Numbering	The numbering under each 5 th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5Variable Length	Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6PatentIn 2.0 "bug"	A "bug" in Patentin version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) Normally, Patentin would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7Skipped Sequences (OLD RULES)	Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8Skipped Sequences (NEW RULES)	Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000
9Use of n's or Xan's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence. (see item 11 below)
11Use of <220>	Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown. Please explain source of genetic material in <220> to <223> section or use "chemically synthesized" as explanation. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32), also Sec. 1.823 of Sequence Rules
Patentin 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13Misuse of n/Xaa	"n" can only represent a single <u>nucleotide</u> ; "Xaa" can only represent a single <u>amino acid</u>

AMC - STIC Systems Branch - 03/02/06

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PCT

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/537,731

3 <110> APPLICANT: SALIMBENI, Aldo et al

DATE: 07/03/2006 TIME: 11:56:39

Input Set: 2 \3874 PTUS sequence listing.txt
Output Set: N:\CRF4\07032006\J537731.raw

```
5 <120> TITLE OF INVENTION: Process for the preparation of bicyclic hexa-peptide
nepadutant
              7 <130> FILE REFERENCE: 3874PTUS
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/537,731
C--> 10 <141> CURRENT FILING DATE: 2005-06-06
            12 <150> PRIOR APPLICATION NUMBER: F12002A000239
            13 <151> PRIOR FILING DATE: 2002-06-12
            15 <160> NUMBER OF SEQ ID NOS: 11
            20 <211> LENGTH: 5
21 <212> TYPE: PRT
22 <213> ORGANISM: bentapeptide Sel Jummy Sel Ju
                                                                                                                                                       Does Not Comply
             27 <222> LOCATION: (1)..(1)
             28 <223> OTHER INFORMATION: Asp is bound to a benzyloxycarbonyl group
             30 <220> FEATURE:
             31 <221> NAME/KEY: MISC_FEATURE
             32 <222> LOCATION: (4)..(4)
             33 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)
          . 35 <220> FEATURE:
             36 <221> NAME/KEY: MOD RES
              37 <222> LOCATION: (5)..(5)
             38 <223> OTHER INFORMATION: METHYLATION
             40 <400> SEQUENCE; 1
  W--> 42 Asp Trp Phe Xaa Leu
              43 1. 5
              46 <210> SEQ ID NO: 2
              47 <211> LENGTH: 5
              48 <212> TYPE: PRT
             49 <213> ORGANISM: Artificial Sequence
              52 <223> OTHER INFORMATION: cyclic pentapeptide
              55 <220> FEATURE:
              56 <221> NAME/KEY: BINDING
              57 <222> LOCATION: (1) .. (1)
              58 <223> OTHER INFORMATION: Asp is bound to a benzyloxycarbonyl group
              60 <220> FEATURE:
              61 <221> NAME/KEY: SITE
              62 <222> LOCATION: (1)..(4)
              63 <223> OTHER INFORMATION: Asp and Dpr are bound together to form a cycle
              65 <220> FEATURE:
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/537,731

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DATE: 07/03/2006

TIME: 11:56:39

```
Input Set : E:\3874 PTUS sequence listing.txt
                    Output Set: N:\CRF4\07032006\J537731.raw
    66 <221> NAME/KEY: MISC_FEATURE
    67 <222> LOCATION: (4) .. (4)
    68 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)
    70 <220> FEATURE:
     71 <221> NAME/KEY: MOD_RES
     72 <222> LOCATION: (5)..(5)
     73 <223> OTHER INFORMATION: METHYLATION ....
     75 <400> SEQUENCE: 2
W--> 77 Asp Trp Phe Xaa Leu
     78 1
     81 <210> SEQ ID NO: 3
     82 <211> LENGTH: 5
     83 <212> TYPE: PRT
     84 <213> ORGANISM: Artificial Sequence
     86 <220> FEATURE:
     87 <223> OTHER INFORMATION: cyclic pentapeptide
     90 <220> FEATURE:
     91 <221> NAME/KEY: BINDING
     92 <222> LOCATION: (1)..(1)
   "93 <223> OTHER INFORMATION: Asp is bound to a benzyloxycarbonyl group
     95 <220> FEATURE:
     96 <221> NAME/KEY: SITE
     97 <222> LOCATION: (1)..(4)
     98 <223> OTHER INFORMATION: Asp and Dpr are bound together to form a cycle
     100 <220> FEATURE:
     101 <221> NAME/KEY: MISC_FEATURE
     102 <222> LOCATION: (4)..(4)
     103 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)
     105 <400> SEQUENCE: 3
W--> 107 Asp Trp Phe Xaa Leu
     108 1
     111 <210> SEQ ID NO: 4
     112 <211> LENGTH: 6
     113 <212> TYPE: PRT
     114 <213> ORGANISM: Artificial Sequence
      116 <220> FEATURE:
      117 <223> OTHER INFORMATION: cyclic hexapeptide
      120 <220> FEATURE:
      121 <221> NAME/KEY: BINDING
      122 <222> LOCATION: (1)..(1)
      123 <223> OTHER INFORMATION: Asp is bound to a benzyloxycarbonyl group and to a tert-
 butyl
               group
      124
      126 <220> FEATURE:
      127 <221> NAME/KEY: SITE
      128 <222> LOCATION: (2)..(5)
      129 <223> OTHER INFORMATION: Asp and Dpr are bound together to form a cycle
      131 <220> FEATURE:
      132 <221> NAME/KEY: MISC FEATURE
      133 <222> LOCATION: (5)..(5)
```

RAW SECUENCE LISTING

PATENT APPLICATION: US/10/537,731

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DATE: 07/03/2006

TIME: 11:56:39

```
Input Set : E:\3874 PTUS sequence listing.txt
                    Output Set: N:\CRF4\07032006\J537731.raw
    134 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-aminopropionic acid)
    136 <400> SEQUENCE: 4
W--> 138 Amp Amp Trp Phe Xea Leu
    139 1
    142 <210> SEQ ID NO: 5
    143 <211> LENGTH: 6
    144 <212> TYPE: PRT
    145 <213> ORGANISM: Artificial Sequence
     147 <220> FEATURE:
     148 <223> OTHER INFORMATION: bicyclic hexapeptide
     151 <220> FEATURE:
     152 <221> NAME/KEY: SITE
     153 <222> LOCATION: (1)..(6)
     154 <223> OTHER INFORMATION: Asp and Leu are bound together to form a cycle.
     156 <220> FEATURE:
     157 <221> NAME/KEY: BINDING
     159 <222> LOCATION: (1)..(1)
     159 <223> OTHER INFORMATION: Asp is bound to a tert-butyl group
     161 <220> FEATURE:
                                       162 <221> NAME/KEY: SITE
     163 <222> LOCATION: (2)..(4)
     164 <223> OTHER INFORMATION: Asp and Dpr are bound together to form a cycle
     166 <220> FRATURE:
     167 <221> NAME/KEY: MISC_FRATURE
     168 <222> LOCATION: (5)..(5)
     169 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)
     171 <400> SEQUENCE: 5
W--> 173 Asp Asp Trp Phe Xaa Leu
     174 1
     177 <210> SEQ ID NO: 6
     178 <211> LENGTH: 6
     179 <212> TYPE: PRT
     180 <213> ORGANISM: Artificial Sequence
     182 <220> FEATURE:
     183 <223> OTHER INFORMATION: bicyclic hexapeptide
     186 <220> FEATURE:
      187 <221> NAME/KEY: SITE
      188 <222> LOCATION: (1)..(6)
      189 <223> OTHER INFORMATION: Asp and Leu are bound together to form a cycle
      191 <220> FEATURE:
      192 <221> NAME/KEY: SITE
      193 <222> LOCATION: (2)..(5)
      194 <223> OTHER INFORMATION: Asp and Dpr are bound together to form a cycle
      196 <220> FEATURE:
      197 <221> NAME/KEY: MISC_FEATURE
      198 <222> LOCATION: (5)..(5)
      199 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)
      201 <400> SEQUENCE: 6/
 W--> 203 Asp Asp Trp Phe Xaa Leu
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/537,731

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DATE: 07/03/2006

TIME: 11:56:39

```
Input Set : E:\3874 PTUS sequence listing.txt
                   Output Set: N:\CRF4\07032006\J537731.raw
   204 1
    207 <210> SEQ ID NO: 7
    208 <211> LENGTH: 6
    209 <212> TYPE: PRT
    210 <213> ORGANISM: Artificial Sequence
    212 <220> FEATURE:
    213 <223> OTHER INFORMATION: bicyclic glycopeptide
    216 <220> FEATURE:
    217 <221> NAME/KEY: SITE
    218 <222> LOCATION: (1)..(6)
    219 <223> OTHER INFORMATION: Asp and Leu are bound together to form a cycle
    221 <220> FEATURE:
    222 <221> NAME/KEY: CARBOHYD
    223 <222> LOCATION: (1)..(1)
    224 <223> OTHER INFORMATION: Asp is bound to
            2-acetamide-3,4,6-tri-O-acetyl-2-deoxy-beta-D-glucopyranosylamine
    227 <220> FEATURE:
    228 <221> NAME/KEY: SITE
    229 <222> MOCATION: (2)..(5)
    230 <223> OTHER INFORMATION: Asp and Dpr are bound together to form a cycle
    232 <220> FEATURE:
    233 <221> NAME/KEY: MISC_FEATURE
    234 <222> LOCATION: (5)..(5)
     235 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)
    237 <400> SEQUENCE: 7
W--> 239 Asp Asp Trp Phe Xaa Leu
     240 1
     243 <210> SEQ ID NO. 8
     244 <211> LENGTH: 6
     245 <212> TYPE: PRT
     246 <213> ORGANISM: Artificial Sequence
     248 <220> FEATURE:
     249 <223> OTHER INFORMATION: bicyclic glycopeptide
     252 <220> FEATURE:
     253 <221> NAME/KEY: SITE
     254 <222> LOCATION: (1)..(6)
     255 <223> OTHER INFORMATION: Asp and Leu are bound together to form a cycle
```

260 <223> OTHER INFORMATION: Asp is bound to 2-acetamide-2-deoxy-beta-D-

265 <223> OTHER INFORMATION: Asp and Dpr are bound together to form a cycle

270 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)

257 <220> FEATURE:

262 <220> FEATURE:

267 <220> FEATURE:

glucopyranosylamine

258 <221> NAME/KEY: CARBOHYD 259 <222> LOCATION: (1)..(1)

263 <221> NAME/KEY: SITE 264 <222> LOCATION: (2)..(5)

268 <221> NAME/KEY: MISC_FEATURE 269 <222> LOCATION: (5)..(5) RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/537,731

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DATE: 07/03/2006

TIME: 11:56:39

```
Input Set : E:\3874 PTUS sequence listing.txt
                    Output Set: N:\CRF4\07032006\J537731.raw
    272 <400> SEQUENCE: 8
W--> 274 Asp Asp Trp Phe Xaa Leu
    275 1
           .
     278 <210> SEQ ID NO: 9
     279 <211> LENGTH: 4
     280 <212> TYPB: PRT
     281 <213> ORGANISM: Artificial Sequence
     283 <220> FEATURE:
     284 <223> OTHER INFORMATION: tetrapeptide
     287 <220> FEATURE:
     288 <221> NAME/KEY: BINDING
     289 <222> LOCATION: (1) .. (1)
     290 <223> OTHER INFORMATION: Trp is bound to a benzyloxycarbonyl group
     292 <220> FEATURE:
     293 <221> NAME/KEY: MISC_FEATURE
     294 <222> LOCATION: (3)..(3)
     295 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)
     297 <220> FEATURE:
     208 <221> NAME/KBY: BINDING
     299 <222> LOCATION: (3)..(3)
     300 <223> OTHER INFORMATION: Dpr is bound to a tert-butoxycarbonyl group
     302 <220> FEATURE:
     303 <221> NAME/KEY: MOD RES
     304 <222> LOCATION: (4)..(4)
     305 <223> OTHER INFORMATION: METHYLATION
     307 <400> SEQUENCE: 9
W--> 309 Trp Phe Xaa Leu
     310 1 .--
      313 <210> SEQ ID NO: 10
      314 <211> LENGTH: 4
     315 <212> TYPE: PRT
      316 <213> ORGANISM: Artificial Sequence
      318 <220> FEATURE:
      319 <223> OTHER INFORMATION: tetrapeptide
      322 <220> FEATURE:
      323 <221> NAME/KEY: MISC_FEATURE
      324 <222> LOCATION: (3)..(3)
      325 <223> OTHER INFORMATION: X is Dpr (i.e. 2,3-diaminopropionic acid)
      327 <220> FEATURE:
      328 <221> NAME/KEY: BINDING
      329 <222> LOCATION: (3)..(3)
      330 <223> OTHER INFORMATION: Dpr is bound to a tert-butoxycarbonyl group
      332 <220> FEATURE:
      333 <221> NAME/KEY: MOD_RES
      334 <222> LOCATION: (3)..(3)
      335 <223> OTHER INFORMATION: METHYLATION
      337 <400> SEQUENCE: 10
```

W--> 339 Trp Phe Xaa Leu

340 1

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 07/03/2006 PATENT APPLICATION: US/10/537,731 TIME: 11:56:40

Input Set : E:\3874 PTUS sequence listing.txt
Output Set: N:\CRF4\07032006\J537731.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 4
Seq#:2; Xaa Pos. 4
Seq#:3; Xaa Pos. 4
Seq#:4; Xaa Pos. 5
Seq#:5; Xaa Pos. 5
Seq#:6; Xaa Pos. 5
Seq#:7; Xaa Pos. 5
Seq#:8; Xaa Pos. 5
Seq#:9; Xaa Pos. 3
Seq#:10; Xaa Pos. 3
Seq#:11; Xaa Pos. 4

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/537,731

DATE: 07/03/2006
TIME: 11:56:40

Input Set : E:\3874 PTUS sequence listing.txt
Output Set: N:\CRF4\07032006\J537731.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:77 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:138 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:203 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:309 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:375 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0